

as the outcome of a damage suit for personal injury is usually unsatisfactory for those engaging in it.

Expert medical testimony is frequently asked of us, and it is a common thing to find a number of men of good standing opposing each other on a case. Many of the most prominent men in our profession have found themselves in this position, and the public has come to regard expert medical testimony as a joke. They feel that it is just a matter of money and that the desired testimony can always be obtained if the price is right. The remedy for this condition is possible within our ranks if we are willing to co-operate with each other and work only for that which is right. Experts can discuss the merits of a case together, and if they do it with a desire to learn the facts, there is seldom any disagreement. If we do not remedy the condition ourselves, it is only a matter of time until courts will appoint medical experts and withdraw the privilege of employing experts at will.

The University of Utah is giving the first two years of the course in medicine, and is in need of the help of our association to make a success of that work. Last year, President Thomas appealed to us for help, asking that we develop a sympathy for the school and help to popularize it, instead of talking adversely of it. Many of us have not realized that we have a real medical school at the university, with capable men in charge of the departments, and I would advise every member of the association to visit the school and give it a careful inspection. You will find well-equipped laboratories and an abundance of material with which to work, and capable, well-trained men in charge of the work, most of them on full time. The school is a credit to our state, and we should give it our hearty support. Learn exactly what the school is, and then encourage men who are going into medicine to do their first two years' work there. Let us send our boys there as well, as we will then have a personal interest in it and will help to make it what it ought to be. Let us not lose the school to the state. President Thomas is determined to develop a real medical school or to abandon it. Let us co-operate with him and make a school of which we can all be proud.

These suggestions covering a number of fields of activity have appealed to me as our definite problems. We cannot afford to be less efficient than we ought to be. We cannot do less than is expected of us in public service. We owe certain obligations to our profession that we must assume. Lastly, we are indebted to ourselves most of all to play the part in our professional life that will make each one indispensable to our organization.

Eccles Building.

The Year's Record Estimated—Based upon past records and the probable degree of industrial activity, the United States Department of Labor has estimated that the 1924 accident record will show 21,232 deaths, 1728 workmen permanently and totally disabled, 105,629 permanent partial disabilities, and 2,324,829 disabled temporarily, a probable total of 2,543,418 accidents for the year. The actual and potential loss in work-days was estimated as totaling 227,169,970, while the wage loss, using an assumed wage of \$4.50 per day, reached the enormous figure of \$1,022,264,866.—California Safety News.

RICE WORKERS' DERMATITIS

By HARRY E. ALDERSON, M. D., AND AUBREY G. RAWLINS, A. B.

(From the Skin Clinic, Stanford University Medical School)

During the past few years there have appeared increasing numbers of cases of dermatitis known by those in the industry as "rice poisoning."

The dermatitis should be classed as occupational, whether due to dirt, fertilizers, water, mosquitoes, or other irritants to which men are exposed in their work.

DISCUSSION by Kendal P. Frost, Los Angeles; Charles E. Schoff, Sacramento; Charles E. von Geldern, Sacramento.

CALIFORNIA produced 5,469,600 bushels of rice during 1923 from an area of 106,000 acres in Butte, Colusa, Glenn, Sutter, and Yolo Counties, in the Sacramento Valley. Rice-farming, while comparatively new, has developed rapidly until it now constitutes one of the many well-established industries of the State. During the past few years there have appeared increasing numbers of cases of dermatitis known by those in the industry as "rice poisoning." Several cases have come before the State Industrial Accident Commission, and the matter has been referred by them to one of us (Alderson) for investigation. Several cases were studied and it was found that they were produced by lack of proper hygiene at work or at home, and that some of them were cases of seborrheic dermatitis with secondary pyogenic infection. Infected scratch-marks, resulting from bites of mosquitoes which were quite numerous in the rice fields, accounted for some cases. Of course, the dermatitis should be classed as occupational, whether due to dirt, fertilizers, water, mosquitoes, or other irritants to which the men are exposed in their work. Likewise, cases of eczema that develop under these same conditions in workers whose skins are more vulnerable as a result of seborrhea, anatomical defects, or constitutional conditions are certainly to be considered occupational.

A questionnaire was sent to the 130 odd physicians in the rice districts, asking for information regarding cases of rice dermatitis that they had observed. The following are typical of the replies received:

A. has had no cases. B. has had cases which he thinks were due to a dye or an oil in the sacks ("as some have appeared where the men have only handled sacks without being exposed to the rice"). C. has seen many cases. The patients usually had seborrheal skin, and hands, forearms, and legs were involved. D. thinks the disease due to local infection (staphylococcus) which enters through mosquito bites or abrasions in the skin. He states that he has had about three hundred cases. E. has had several cases. F. says that nearly always there are several cases in the rice-mill in his locality. G. (an eye specialist) reports many cases of conjunctivitis among rice workers. H. has seen several cases, but none this year. I. reports that, in his opinion, there is no such thing as a specific rice dermatitis, and that the workers are inclined to call every skin irritation "rice poisoning." He believes that dermatitis often results from handling sacks in the warehouse.

Judging from the replies, it seems that the so-called "rice poisoning" is decreasing in prevalence in

California. This might be due to the fact that there was less rice farming in 1923. The responses to our questionnaire would seem to indicate that a specific rice worker's dermatitis does not exist here, and this opinion for awhile was held by one of us. However, further investigation has convinced us that the reverse is true.

There is very little in the literature on the subject. Mantegazza describes a papulo-pustular dermatitis which involves the feet, legs, hands, and arms of large numbers of the workers in certain rice fields. It affects all ages and conditions more or less alike. Intense itching is a constant feature. The dermatosis subsides soon after removing the patient

1. Barley dust - Low power.



from his work. The author suggests the following possible etiological factors:

1. Predisposing causes: warmth of water, maceration, thinning of skin, alkalies, fertilizer, or other substances dissolved in the water.
2. Determining causes: thorns of a water plant ("najas minor").
3. Complicating causes: ordinary pyogenic organisms.

Sangiorgi describes a persistent itchy erythematous eruption which becomes oedematous papular and then pustular, involving the arms and legs only. He believes that constant immersion in water containing weeds, grasses, and also irritants in solution are the main etiological factors, and does not blame the rice plant itself.

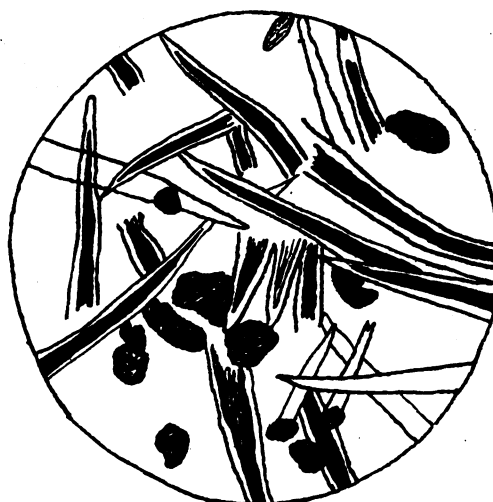
In considering whether or not any given dermatitis is occupational, one should always bear in mind that there are many underlying factors that may increase the vulnerability of the skin. For instance, gastro-intestinal disturbances, indiscretions in diet, alcoholism disturbances of the endocrine gland system, idiosyncrasies for chemicals, food substances, unfavorable home environment, and focal infections. Also there are various local etiological factors, such as anatomical defects of the skin, seborrhea, hyperidrosis, diminished secretions of the skin, circulatory disturbances, irritating clothing, overzealous bathing, insufficient bathing, irritating soap, uncleanness, and hard water.

One of us (Rawlins) had considerable personal experience in this work while a student. From seeing a few cases, working in a rice warehouse, visiting the camps and talking with a large number of the workers, the impression was gained that the dermatitis is produced mainly by the irritating effects of the rice dust. Not a single case was observed (during the investigations carried through the summer) where water appeared to be the cause. All workers (including Rawlins) agreed that the rice dust itself was very irritating and caused severe itching. Barley dust has a similar effect, but the rice dust is more irritating.

In many of the rice workers' camps it was found that sanitary conditions were bad, the bathing facilities being quite deficient. Even where the conditions were good, however, often the workers failed to keep properly clean. It was noted that, even where the men kept very clean, there were numbers of cases of rice dermatitis. An important factor contributing to the general skin irritation is the constant presence of large numbers of mosquitoes in the rice fields. Another observation was that most of the soil in the rice districts is alkaline. This would tend to produce dryness of the skin, thus rendering it more susceptible to the effects of some irritants.

This dermatitis assumes different forms, varying with the individual. It appears to begin usually as

2. = Rice Dust - Low power.

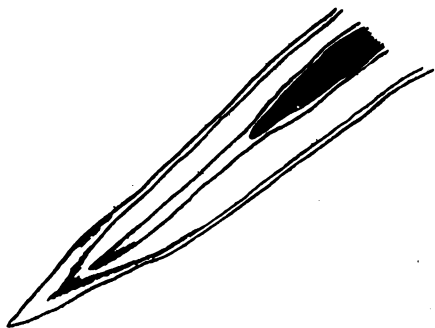


an erythema accompanied by folliculitis with severe itching. Many of the lesions soon become pustular. Numerous excoriations from scratching appear. These often become secondarily infected. The sides of the fingers, flexor aspect of the wrists (thin epidermis), ankles, face, scalp, neck, and upper chest are the regions usually involved. Often there is conjunctivitis, which at times is quite severe. These are the areas, of course, on which most of the rice dust would be deposited. The wrist lesions are usually most aggravated, for here the rubbing of the sleeves or rubbing against the rice sacks are important factors. There are often cases where infected mosquito bites on exposed parts constitute the clinical picture.

For experimental purposes we obtained samples

of rice and rice dust from the various threshers, mills, and warehouses. We have tried to get patients with rice dermatitis for testing with these substances (offering them free hospital beds at Stanford), but so far none have appeared. This is greatly regretted, for such material would have produced valuable evidence, particularly on the subject of specific sensitization to rice. Protein skin tests will be applied as soon as proper material is available. We found one case among the workers who always had dermatitis and asthma when exposed to the grain dust. However, we tried out the materials on our own skins and on several of our clinic patients, utilizing regions where the epidermis was

3. Barley - High power of plant hair-



thin. We used the dry powder, aqueous and alcoholic emulsions of the same. They were rubbed into the skin and then gauze saturated with the material (dry and moist) was applied under adhesive plaster and left on for twenty-four hours. We did not test for protein sensitization. The usual result was a mild, slightly itchy erythema, which subsided in a day or so. It must be remembered, of course, that these conditions were different from those observed in the rice districts. The substance is on the skin of the rice workers constantly for many hours every day. The men, as a rule, are dirty and often irritated by swarms of mosquitoes. Clinical observations made in the rice districts, then, furnish the best, and we believe conclusive evidence that there is a specific "rice workers' dermatitis."

Microscopic examination of the dust shows, largely, a mass of plant hairs. Comparing the microscopic picture of rice dust and barley dust, using uniform preparations in cedar oil, there are about five times as many of these barbs in the rice as in the barley dust. (Note drawings.) This fact might help to explain why the rice dust is more irritating than the dust from other grains in the same vicinity.

Regarding the composition of rice, it was found that, unlike other grains, it contains a high percentage of silicon (about 16 per cent). This may account for the dust particles being more needle-like, and consequently irritating.

As far as we can learn, the najas minor plant (mentioned in Mantegazza's article) is not found in California. From the foregoing observations we feel justified in concluding that:

1. There is a specific rice workers' dermatitis, due

to the peculiarly irritating qualities of the rice grain. It has not yet been determined if protein sensitization is a factor in some cases.

2. There are also occupational dermatoses appearing on the skin of rice workers, as a result of scratched, infected mosquito bites, and dirt or both,

3. Unhygienic conditions in some of the camps and homes of the workers, as well as lack of personal cleanliness, account for some cases.

240 Stockton Street, San Francisco.

DISCUSSION

DR. KENDAL P. FROST (831 Pacific Mutual Building, Los Angeles)—Dr. Alderson's paper is a very stimulating one. There being no cultivation of rice in my section of the state, I have not had an opportunity to observe any of these cases. From the description I should be inclined to feel that the condition is not due to rice protein sensitivity, but rather to the mechanical irritation plus infection. Of course, there may be cases of rice sensitivity. In these one would anticipate a more eczematous syndrome.

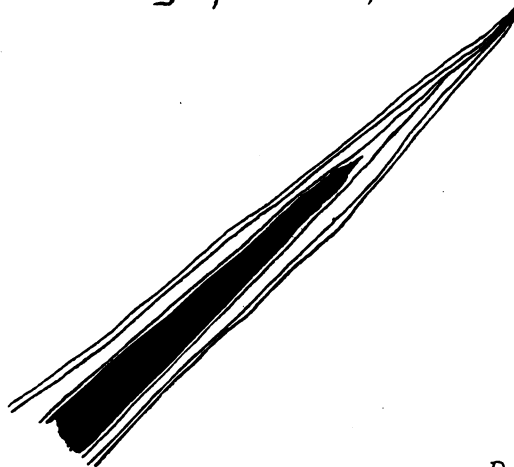
CHARLES E. SCHOFF, M.D. (Farmers and Mechanics Bank Building, Sacramento)—I am pleased to have the opportunity of saying a few words relative to Dr. Alderson's paper, and it shows that he and Rawlins have spent considerable time upon this subject, which at one time was a much debated point, particularly with the State Industrial Accident Commission.

My experience with rice worker's dermatitis has been limited to five cases, three of which were definite dermatitis and two which proved, on investigation, to be a trichophyton in sack handlers of rice.

The cases were all referred to me after having been in progress some length of time, and were in individuals who were employed in the handling of "paddy rice" in the warehouse.

The skin manifestations varied from lesions confined to the hands, lower forearms and lower legs to a gen-

4. Rice - High power of plant hair



Rawlins

eralized involvement. There was nothing particularly peculiar to this type of skin irritation in its specific self, it being a papular, vesicular, traumatically excoriated, secondarily infected, diffuse, oedematous type of dermatitis, appearing first on the exposed surfaces and being confined there or spreading mechanically to the covered parts of the body.

The hygienic conditions surrounding these cases were good, two of them being men of families and homes, and the other housed in a hotel with facilities for body cleanliness and bed changes. Nor did I think that any of the cases presented a seborrheic type of a skin.

I merely mention these two facts to bring out the point that these cases developed in an atmosphere peculiar to

themselves; they persisted in that atmosphere and cleared up in due course of time when removed from the producing environment. It is of interest to note that one of the cases returned to work in the mill, and in a short time had a slight recurrence which necessitated his giving up that type of work, as he had been advised.

Another point of interest is that these cases do not develop in any other department of the mill other than in those who are handling paddy rice. I am informed from the mill management that clean rice workers, i. e., those employed in the polishing department, are free from such discomforts.

The trichophyton cases were peculiar, in that their lesion appeared practically at the same site although on opposite forearms about two inches above the flexure fold of the wrist, in truckmen who were handling rice—one employed in the field and the other in the warehouse.

The lesions were annular, about one and one-half inches in diameter, papular pustular, discrete folliculitis, the hairs showing a small spored ecto-thrix in both cases, with very few mycelium present.

Some work was attempted without results in an effort to determine if the animal habitue (cats and rodents) of the warehouse might have been the source, or if the mould on the sacks might have been responsible.

I quite agree with Dr. Alderson that there is a definite dermatitis produced in workers in rice. Whether this is due to a mechanical irritation from the dust, a chemical irritation or a protein sensitization still leaves a field for further investigation.

I question the protein sensitization, on the ground that if it were so it seems to me that we would see some of the cases originate in the polishing department of the rice mills, where the clean grain is handled entirely.

CHARLES E. VON GELDERN, M. D. (Forum Building, Sacramento, Calif.)—That the so-called rice workers' dermatitis is comparatively rare is shown by the scarcity of the literature and the fact that so few of these cases come under the care of industrial surgeons.

I fully agree with Dr. Alderson and Rawlins that the so-called rice workers' dermatitis is due to the irritating qualities of the rice grain which appear in the dust during the harvesting and in the milling. I saw, a number of years ago, a patient who had caulked a leaking feeder in one of the mills, and was subjected to dust and rice-hulls for a number of hours. His face, especially on the left side, was red, swollen and tender, with numerous small discrete papules. The itching was intense. The forearms were not affected to quite the same extent. The parts covered by clothing were not involved, which showed that the effect was a direct one.

A comparatively large number of rice workers have been sent to me for treatment for dermatoses. In most of these, the history did not show any relationship between their occupation and the disease. The most common affection was impetigo contagiosa. Two workers came from the same mill, at the same time, with a trichophyton infection. One of these men was employed in cutting out mouldy portions in sacks of rice which had been subjected to moisture. The other employee worked in the mill and did not come in contact with the first one, yet the lesions were similar in nature and location. At the time I made an investigation of the mill, but was unable to establish any definite relationship between the disease and the occupation. The manager of the mills had heard rumors regarding the cats which were said to be infected, but on investigation no disease was found among them.

On investigation, the various rumors and lay opinions were not substantiated, and at best the belief that the rice dust was the causative factor was merely suggestive.

It is, however, fairly certain, as shown by Alderson and Rawlins, that rice dust does produce a dermatitis in certain susceptible individuals, due to its abrasive action. It has not been shown, however, that such a dermatitis is specific, for, unless a clear history is obtained and the cases observed at an early stage, it is not possible to assert with any degree of certainty the cause of the skin manifestations.

Many of the dermatoses should be classed as industrial diseases, unless it can be definitely proved that the factors producing them are not connected with the occu-

pation. This is manifestly difficult, but it is only fair to the worker that he be given the benefit of the doubt.

DOCTOR ALDERSON (closing)—I wish to thank those discussing our paper for their valuable suggestions.

All available evidence is against there being specific sensitization to rice in these cases. Observers agree that the dermatitis is due rather to factors producing trauma or infection or both. As noted by Schoff and Von Geldern (who practice in the rice territory) cases are seen only among those exposed to rice before it is cleaned. If specific sensitization were a factor, cases would appear among those handling only the polished rice. Furthermore, as observed by Frost, the eruption would be more eczematous in character.

What One Health "Officer" Thinks of Baby Shows—“These baby shows make me sick. Think of hauling around a number of babies in the heat, dust and dirt that obtains at the usual county fair. Supposedly, this is done for the benefit of the babies. Actually, it is done because someone is making some money out of it, and so far as the poor babies are concerned it amounts to nothing. A fellow came in a few months ago. He said he was going to put on a baby show for one of the papers. I bluntly asked him where he would get his compensation, and he said he was an expert baby photographer. I told him, so far as the health department was concerned, there would be no sanction of his campaign, and so far as I was concerned, personally I was opposed to any such commercializing of child welfare. This fellow proved an expert liar. He went around and told other doctors and the visiting nurses I was in perfect agreement with his plans and he had everything set. I heard of this. I saw the editor of the paper and had a friendly talk with him, and gave him some ideas about baby contests he did not have. When the fellow returned to put on his campaign he found there was not a doctor in our city who would have anything to do with him. Of course, the nurses were ready, but the editor of the paper refused to go on with the thing, because he had become convinced that it was not really a child welfare proposition at all. So, we headed this one off. But later the — got mixed up with a combined beauty, better-baby-popularity contest. Those of us who are interested in pediatrics refused to have anything to do with it, but some of the other men spent some time at the county fair looking over the babies. What possible good can come to the babies in such hastily conducted examinations? I am off these things for life.”—Indiana Medical Journal.

Wagner-Jauregg Treatment of Paresis—Doctor Jossmann, in reporting 100 patients treated by this method (Medical Standard), says that all stages of paralysis were treated by the method, and the result was that twenty-one patients were enabled to begin working again, although slight traces of paralysis were still present. Twenty-eight patients were able to resume work to a limited extent, the paralytic symptoms having undergone a considerable amelioration. In thirty-nine patients no improvement worth mentioning was noticeable, and twelve patients died during or in consequence of the treatment. Even in the improved cases slight disturbances of speech and irregularity of the pupils remained. The intellect did not entirely return to normal, and a lack of insight into the state of illness remained. Jossmann comes to the conclusion that, although it is still too soon for a final judgment to be passed, it has nevertheless been ascertained that, during the eighteen months in which the Wagner-Jauregg method has been available, improvement has taken place in about 50 per cent of the patients, especially in the early stages of the disease.

“For of Such”—The three realms of Fairyland, of Art, and of Nature constitute our being. The re-entry to fairyland, that land of wonder in which we never grow up out of that heaven which lies about us in our infancy, can be won by cultivating the friendship of children and by the study of the beauty of life in the land of dreams, out of which we may achieve when awake the realization of life's duty.—British Medical Journal.